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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/788,259

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Edward G. Tiedemann JR.

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06/02/2005

Qualcomm Incorporated
Patents Department
5775 Morehouse Drive
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EXAMINER

CHO, HONG SOL

ART UNIT

PAPER NUMBER

2662

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/788,259	Applicant(s) TIEDEMANN ET AL.	
	Examiner Hong Cho	Art Unit 2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 22-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 22-25 and 27-30 is/are rejected.
- 7) ☒ Claim(s) 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The following is a response to the amendments filed on 1/24/2005.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 7-11, 22-25, and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumar et al (U.S 6757270), hereinafter referred to as Kumar, in view of Chung et al (U.S 6741862), hereinafter referred to as Chung.

Re claims 1-3, 9, and 22, Kumar discloses a channel structure of reverse link of a wireless communication system with a fundamental channel handling both signaling and data transmission (*transmit data and signaling*, column 2, lines 6-7), a supplemental channel handling data transmission (*transmit packet data*, column 2, lines 16-17), a control channel handling signaling on the reverse link (*transmit signaling*, column 2, lines 19-22), and a forward power control channel controlling the reverse-link power for a different mobile station (*transmit power streams for the reverse link for a particular remote terminal*, column 17, lines 56-61). Kumar discloses a forward power control channel controlling the reverse-link power of the reverse supplemental channel with

respect to other reverse-link channels such as reverse control and traffic channels by periodically sending repeated power control bit to the mobile station (*transmit the first power control stream to control the transmit power of the reverse supplemental channel relative to that of a designated reverse-link channel*, column 17, lines 56-61). Kumar fails to disclose transmitting second power control packet to control a transmit characteristics of the reverse supplemental channel. However, Chung discloses puncturing (multiplexing) reverse power control bits to change the reverse data rate of reverse link channel (*control a transmit characteristics such as data rate of the reverse link*, column 11, lines 53-56). In view of this, having the teaching of Chung and the system of Kumar, it would have been obvious to one having ordinary skill in the art at the time the invention was made to replace one or more reverse power control bits with the rate control bit. The motivation to combine is to get the benefit of enhanced reverse-link rate throughput and reduced reverse-link interference by controlling reverse-link data rates of supplemental channels of mobile stations.

Re claims 10, 11, 27 and 28, Kumar discloses all of the limitations of the base claim, but fails to disclose controlling the transmit power or data rate of reverse supplemental channels assigned to the group of remote terminals. Chung discloses sending reverse power control bits to each mobile station periodically to control data rate of reverse supplemental channels (*control transmit power or data rate of the group of remote terminals; enable and disable transmissions on reverse supplemental channels*, column 11, lines 45-47). It would have been obvious to one having ordinary skill in the art at the time the invention was made to replace one or more reverse power control bits

with the rate control bit. The motivation to combine is to get the benefit of enhanced reverse-link rate throughput and reduced reverse-link interference by controlling reverse-link data rates of supplemental channels of mobile stations.

Re claim 7, Kumar discloses establishing and maintaining supplemental channel by sending supplemental channel assignment message (SCAM) to inform the mobile of the supplemental channel assignment (*assign and de-assign supplemental channel by signaling transmitted by the reverse control channel*, column 15, lines -5).

Re claim 8, Kumar discloses receiving a message indicating that a mobile unit has the reverse-link data to transmit (*a reverse rate indicator channel transmitting information related to data transmission on the reverse link*, column 22, lines 42-45).

Re claim 23, Kumar discloses controlling the reverse-link power of the reverse supplemental channel with respect to other reverse-link channels such as reverse control and traffic channels by periodically sending repeated power control bit to the mobile station (*receive power control stream to control the transmit power of the reverse supplemental channel relative to that of a designated reverse-link channel*, column 17, lines 56-61).

Re claims 24 and 25, Kumar discloses all of the limitations of the base claim, but fails to disclose sending the frame with reverse power control bits to each mobile station periodically to control data rate of reverse supplemental channels. Chung discloses sending the frame with reverse power control bits to each mobile station periodically to control data rate of reverse supplemental channels (*control data rate or enable and disable transmission of supplemental channel*, column 11, lines 45-47). It would have

been obvious to one having ordinary skill in the art at the time the invention was made to replace one or more reverse power control bits with the rate control bit. The motivation to combine is to get the benefit of enhanced reverse-link rate throughput and reduced reverse-link interference by controlling reverse-link data rates of supplemental channels of mobile stations.

Re claim 29, Kumar and Chung disclose all of the limitations of the base claim, but fail to disclose explicitly a transmit data processor, a receive data processor, and a controller coupled to transmit and receive data processors performing the process mentioned in claim 1. However, Kumar's modified system with Chung as explained in the rejection of claim 1 inherently includes processors for transmitting data and signaling on reverse data channels and for receiving power control streams from a power control channel and a controller adjusting power level and data rate of a reverse supplemental channel.

4. Claims 4-6 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumar in view of Chung and in further view of Sen et al (U.S. 6,208,620), hereinafter referred to as Sen.

Re claim 4 and 30, Kumar and Chung disclose all of the limitations of the base claim, but fail to disclose a forward channel transmitting a signaling packet indicating if the receiver has received a packet. However, Sen discloses TCP-Aware Agent Sublayer (TAS) mechanism, coupled to a traffic channel, informing the transmitter about frames

the receiver has not received (*a forward acknowledgement channel to transmit signaling indicative of received status of the packet*, column 11, lines 23-27). It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement system of Sen to Kumar to get the benefit of enhanced packet transmission performance over wireless network by using TCP transmission control scheme (column 3, lines 39-42).

Re claims 5 and 6, Kumar and Chung disclose all of the limitations of the base claim, but fail to disclose transmitting ACK packets during forward transmission. Sen discloses transmitting ACK packets during forward transmission (*transmit an ACK on the forward acknowledgement channel*, column 11, lines 26-30). It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement system of Sen to Kumar to get the benefit of enhanced packet transmission performance over wireless network by using TCP transmission acknowledgement scheme

Allowable Subject Matter

5. Claim 26 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

6. Applicant's arguments filed on 1/24/2005 have been fully considered but they are not persuasive.

On page 8 of the amendment Applicant seems to argue that Chung does not teach a first power control stream that controls the transmit power of the reverse supplemental channel in combination with at least one other reverse link channel. Examiner respectfully sees this argument as misplaced. Examiner did not rely on Chung in answering this limitation; the rejection clearly specifies that this limitation is taught by the Kumar reference. Applicant further argues that Chung does not teach a power control stream that controls only the reverse supplemental channel. This argument is also seen as irrelevant because the claim does not specify that only the reverse supplemental channel be controlled.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hong Cho whose telephone number is 571-272-3087.


The examiner can normally be reached on Mon-Fri during 7 am to 4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-3088.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

hc

Hong Cho
Patent Examiner
5/16/2005


JOHN PEZZLO
PRIMARY EXAMINER